



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

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SR

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/126,156	07/30/98	GRABOWSKY	J TET-1689

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PM82/0209

EXAMINER

GIBSON, E

ART UNIT

PAPER NUMBER

3661

DATE MAILED:

02/09/00

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/126,156

Applicant(s)

GRABOWSKY ET AL.

Examiner

Eric M Gibson

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24, 26-28 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-28, 30-32, 34 and 35 is/are allowed.
- 6) ☒ Claim(s) 1-24 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 30 December 1999 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☒ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 17) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: _____.

Art Unit: 3661

DETAILED ACTION

Information Disclosure Statement

The references listed on the Information Disclosure Statement filed on 11/12/1999 (paper # 4) have previously been cited in the first office action (paper #3), with copies provided. Therefore, they have already been considered and are crossed off on paper # 4.

Drawings

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 12/30/1999 have been approved.

Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office Action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

Applicant is reminded of the objections to the drawings made by the draftperson (PTO-948), attached to paper # 3.

Specification

The amendment to the specification was not entered because the change was directed to page 9, line 9, instead of line 7. Therefore, the examiner has changed reference number "16", on page 9, line 7, to '45'.

Art Unit: 3661

Claim Rejections - 35 USC § 112

The rejections of claims 8-13, and 16 have been withdrawn as corrected by amendment.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 7, and 15-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bailey et al. (5,550,738).

As per claims 1 and 4, wherein the data transmission system comprises a communications unit, a cellular infrastructure in communication with the communications unit after the aircraft has landed, and a data reception unit in communication with the cellular infrastructure, is anticipated by Bailey. Bailey is directed to a vehicle, an aircraft is considered to be a vehicle. Bailey discloses a data acquisition unit (vehicle data unit 16), comprised of a communications unit located on the vehicle (cellular modem 43), the communication unit is in communication with a cellular infrastructure (col. 2., lines 35-36). Communication occurring after the aircraft has landed therefore takes place on the ground as opposed to the air. The data transmission occurring after the aircraft has landed is in no way different from data transmission occurring in any other land vehicle. An airplane is a land vehicle, travelling

Art Unit: 3661

via wheels, once it is on the ground. In Bailey, the communication is occurring on the ground. Furthermore, Bailey discloses a data reception unit (data reporting system 12) in communication with the cellular infrastructure.

A per claim 7, wherein the system of claim 1 further includes a router, processor in communication with the router, and a storage unit connected to the processor, in the data reception unit, Bailey discloses these limitations in data reporting system 12. In column 5, lines 26-40, Bailey discloses a data reception unit including a router (45), a processor (microprocessor 72), and a storage unit (disk drive 74).

As per claim 15, the previous rejections establish that Bailey discloses means for transmitting data via a cellular infrastructure and means for receiving data from the cellular infrastructure. As stated previously, Bailey is directed to a vehicle, an aircraft is considered to be a vehicle and communication occurring after the aircraft has landed therefore takes place on the ground as opposed to the air. In Bailey, the communication is occurring on the ground.

As per claims 16 and 17, wherein the transmitting and receiving units contain processors, refer to the above explanations regarding claim 7, which establishes that Bailey discloses processors.

MPEP §2131.05 states that "arguments that the alleged anticipatory prior art is 'nonanalogous art' or 'teaches away from the invention' or is not recognized as solving the problem solved by the claimed invention, [are] not 'germane' to a rejection under

Art Unit: 3661

section 102." *Twin Disc, Inc. v. United States*, 231 USPQ 417, 424 (Cl. Ct. 1986)(quoting *In re Self*, 671 F.2d 1344, 213 USPQ 1, 7 (CCPA 1982)).

This applies where the applicant argues that the anticipatory prior art is for a land vehicle and the invention is for an aircraft. When the aircraft is on the ground, it is a land vehicle and data transmitted therefrom is treated no differently than data from any other land vehicle.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 10, 12, 14, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al. in view of Farmakis et al. (US 5,714,948).

Claims 8, 12, and 14 include a data system for an aircraft comprising a digital flight data acquisition unit in communication with at least one sensor. Bailey discloses a data acquisition unit (microprocessor-based vehicle data unit 16) in communication with at least one sensor (26) in figure 2. As stated previously, Bailey is directed to a vehicle, an aircraft is considered to be a vehicle. In column 5, lines 35-37, Bailey discloses a serial interface (84) in communication with the processor of the data acquisition unit.

Art Unit: 3661

Furthermore, Bailey discloses a plurality of cell channels in communication with the serial interface in column 4, lines 17-20. As stated previously, communication occurring after the aircraft has landed therefore takes place on the ground as opposed to the air. In Bailey, the communication is occurring on the ground. Furthermore, the claims are specifically directed to flight data and flight data acquisition units with regard to what type of data is being transmitted. However, the transmission of flight data is no different than transmission of data for any other vehicle in that data relating to the vehicle is being transmitted. The transmission of the data is in no way effected by what type of data it is. If the vehicle were a train the data would be train data, if the vehicle were an automobile the data would be automobile data, and here the vehicle is an aircraft and the data is correspondingly aircraft data. No special steps are implemented because the data comes from an aircraft as opposed to any other vehicle. Farmakis teaches that aircraft data from an aircraft on the ground (col. 16, lines 45-55) is transmitted to an ATC facility and that the systems used to communicate with the aircraft on the ground can be used in vehicles such as ships, automobiles, railroads, submarines, etc. (col. 22, line 63 – col. 23, line 2). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use the system and method of Bailey to specifically transmit flight data related to an aircraft, as exemplified by Farmakis.

As per claim 10, wherein the processor is a personal computer, see Bailey column 5, line 27.

Art Unit: 3661

As per claim 19, the invention has been previously disclosed by Bailey in the above rejections, with the exception of the step of processing the data to prepare for transmission. In column 4, lines 17-19, Bailey discloses breaking the data into individual, self-contained packets. This is considered to be processing the data in preparation for transmission. Furthermore, Farmakis teaches transmitting coded signals or data to an ATC facility, including a header segment and an information segment (col. 17, lines 1-10). This is also considered to be processing of data. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to include processing the data in the invention, as taught by Bailey and further exemplified by Farmakis.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bailey and Farmakis in further view of Levine (US 5,890,079). Bailey and Farmakis disclose the invention as explained in the previous rejections. The combination does not teach receiving the data at a flight operations center. Levine teaches transmission of aircraft flight data to a central ground based processing station. As seen in Figure 4 of Levine, the central ground based processing station includes air traffic control and the aircraft manufacturer facility, any and all of which can be considered a flight operations center. It would have been obvious to one of ordinary skill in the art, at the time of invention, to send the vehicle data to a flight operations center, in order to allow the information to be stored remotely and analyzed by skilled personnel, as explained in Levine (column 4, lines 17-28).

Art Unit: 3661

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bailey, Farmakis, and Levine as applied to claim 20 above, and further in view of Cleave (US 5,793,813). The combination discloses the invention as explained in the previous rejections of claim 20. The combination does not teach using the Internet or public switched telephone network (PSTN) to receive the data from the cellular infrastructure at the data reception unit. Cleave teaches in column 4, lines 44-47, the use of the Internet or PSTN coupled to the gateway to receive the information at the data reception unit in a data communications system. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to provide the invention taught by the combination of Bailey and Levine with a connection to the Internet or PSTN in order to receive the data from the cellular infrastructure.

Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey in view of Cleave. Bailey et al. discloses the invention as explained in the previous rejections of claim 1. Bailey does not teach using the Internet or public switched telephone network (PSTN) to receive the data from the cellular infrastructure at the data reception unit. Cleave teaches in column 4, lines 44-47, the use of the Internet or PSTN coupled to the gateway to receive the information at the data reception unit in a data communications system. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to provide the invention of Bailey et al. with a connection to the Internet or PSTN in order to receive the data from the cellular infrastructure.

Claims 5- 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey in view of Averbuch et al. (US 5,901,142). Bailey discloses the invention as

Art Unit: 3661

explained in the previous rejections. Bailey does not teach a cellular infrastructure with an antenna, transceiver subsystem, and controller. Averbuch teaches a cellular infrastructure including an antenna, transceiver subsystem, and controller (figure 1). It is well known in the art that in order for a cellular communications system to operate it must contain these items. It would have been obvious to one of ordinary skill in the art, at the time of invention, to include in the invention of Bailey the components of a cellular system that are well known in the art, as shown by Averbuch, in order for it to function properly.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bailey and Farmakis as applied to claim 8 above, and further in view of Averbuch. The combination discloses the invention as explained in the previous rejections. The combination does not teach a cellular infrastructure with an antenna, transceiver subsystem, and controller. Averbuch teaches a cellular infrastructure including an antenna, transceiver subsystem, and controller (figure 1). It is well known in the art that in order for a cellular communications system to operate it must contain these items. It would have been obvious to one of ordinary skill in the art, at the time of invention, to include in the invention the components of a cellular system that are well known in the art, as shown by Averbuch, in order for it to function properly.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bailey and Farmakis as applied to claim 8 above, and in further view of Harper, Jr. et al. (US 5,519,663). The combination discloses the invention as explained

Art Unit: 3661

in the previous rejections. The combination does not teach that the processor may be an application specific integrated circuit (ASIC). It is well known in the art to use an ASIC for specific applications. Harper, Jr. demonstrates that using an ASIC is equivalent to using a microprocessor in column 5, lines 64-67. It would have been obvious to one of ordinary skill in the art, at the time of invention, to include in the invention the features of a processor that are well known in the art in order to allow better operation, as exemplified by Harper, Jr.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bailey and Farmakis as applied to claim 8 above, and in further view of Steiner (4,939,652). The combination discloses the invention as explained in the previous rejections. The combination does not teach that the processor has an I/O interface. It is well known in the art to use an I/O interface connected to a processor to allow for the exchange of data with the processor. Steiner shows this in column 6. It would have been obvious to one of ordinary skill in the art, at the time of invention, to include in the invention the features of a processor that are well known in the art in order to allow better operation, as exemplified by Steiner.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bailey and Farmakis as applied to claim 19 above, and in further view of Krenzel (US 5,124,915). The combination teaches the use of a cellular digital packet data network in the invention as previously explained. The combination does not teach the use of compression or encryption in the data network. Krenzel teaches compression/uncompression of data in column 3, lines 30-41, for the use in a data communication system. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to include in the invention the data

Art Unit: 3661

compression/uncompression as taught by Krenzel in order to reduce the file size of the data needed to be transmitted, increasing the speed of transmission. Encryption, and subsequent decryption at the receiving end, is well known in the art to provide additional security for the transmission of data via a wireless system. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to include data encryption and decryption in the invention in order to provide additional security over a wireless system.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bailey, Farmakis, and Krenzel as applied to claim 23 above, and in further view of Steiner. The combination teaches the invention as explained in the previous claims including the use of disk drives for data storage. The combination with Krenzel teaches the invention as explained in the rejection of claim 23. The combination does not teach acknowledging receipt of data. Steiner teaches the acknowledgment of receipt of data in column 9, lines 16-17, in a data packet communication system. It would have been obvious to one of ordinary skill in the art, at the time of invention, to include in the combination the data acknowledgment receipt of Steiner in order to ensure proper delivery of data through the system.

Claim 33 is rejected under 35 U.S.C. 103(a) as obvious over Bailey in view of Winslow (US 5,852,825). Bailey does not teach writing a computer program to a suitable medium to implement the steps of data exchange when the program is executed by the processor. The writing of programs stored on computer readable media to implement specific functions is well known in the art. Several programs exist that are well known in the art of data transmission, refer to Winslow, column 4, lines 20-29 for examples of data transmitting programs that are well known in the art. Therefore,

Art Unit: 3661

it would have been obvious to one of ordinary skill in the art, at the time of invention, to write a program capable of implementing the recited steps as already present in Bailey, as it is well known to write computer programs to implement specific applications, as exemplified by Winslow.

Allowable Subject Matter

Claims 26-28, 30-32 and 34-35 are allowed.

Response to Arguments

Applicant's arguments filed 12/30/1999 have been fully considered but they are not persuasive.

Bailey is relied upon to disclose a system and method for transmitting vehicle data via a cellular infrastructure. Since once an aircraft had landed it becomes a land vehicle, there is no difference in transmitting data from an aircraft as opposed to transmitting data from any other land vehicle.

Furthermore, the claims are specifically directed to flight data and flight data acquisition units with regard to what type of data is being transmitted. However, the transmission of flight data is no different than transmission of data for any other vehicle in that data relating to the vehicle is being transmitted. The transmission of the data is in no way effected by what type of data it is. If the vehicle were a train the data would be train data, if the vehicle were an automobile the data would be automobile data, and

Art Unit: 3661

here the vehicle is an aircraft and the data is correspondingly aircraft data. No special steps are implemented because the data comes from an aircraft as opposed to any other vehicle.

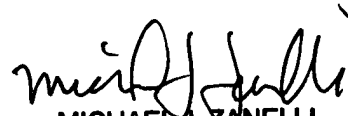
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric M Gibson whose telephone number is (703) 306-4545. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski can be reached on (703) 308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

emg
February 2, 2000


MICHAEL J. ZANELLI
PRIMARY EXAMINER